

## SYSTEM AND METHOD FOR DIAGNOSTIC MULTICAST SWITCHING

### ABSTRACT OF THE INVENTION

5           An integrated circuit relay device and switching method are  
presented that permit communications to be routed in a variety of  
patterns so that diagnostic procedures can be performed in situ, to  
evaluate digital wrapper communication links. The relay has a pair of  
inputs, a pair of outputs, a decoder, and an encoder. The relay is  
10   programmable to operate in a variety of modes, so that communications  
can be passed between any set of ports, with or without encoding and  
decoding processes. The flexible relay routing permits either test signals  
or normal communications to be conducted through the device.